UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,402	06/25/2003	James N. Buttrick JR.	BING-1-1006	5644

25315 7590 04/07/2006

BLACK LOWE & GRAHAM, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

EXAMINER	
TALBOT, MICHAEL	

ART UNIT	PAPER NUMBER
3722	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/606,402	BUTTRICK, JAMES N.	
	Examiner	Art Unit	
	Michael W. Talbot	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/19/05 & 11/21/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by York '814. York '814 shows in Figure 1 an apparatus (10) comprising a base member (22) having a first aperture (at base of 32) disposed therethrough, a drive platform (24) being spaced apart from the base member by a separation distance and having a second aperture (at 32) disposed therethrough and approximately aligned with the first aperture along an axis, a plurality of guide members (18,20) extending between the drive platform and base member wherein at least one of the drive platform and the base member is moveable along guide members to changed the separation distance (col. 2, lines 26-31), at least one drive member (32) coupled between the drive platform and the base member, and a servo motor (36 and col. 2, lines 43-45) to move the drive member causing a varying separation distance. York '814 shows the plurality of guide members and the at least one drive member being distributed around the first and second apertures. York '814 shows a tool assembly (34) coupled to the drive member (48,54).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over York '814. York '814 shows the drive platform having a first annular portion (48) and the base member including a second annular portion (46) being aligned along an axis. York '814 lacks the specific reference to the plurality of guide members and the at least one drive member being concentrically spaced about the annular portions. Instead, York '814 indicates that the plurality of guide members and the at least one drive member are non-concentrically located about the annular portions. At the time of the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to select a "concentric arrangement of the members" because it would result in a more compact assembly. Furthermore, Applicant has not disclosed that the "concentric arrangement of the members" provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the apparatus of York '814, and Applicant's apparatus to perform equally well with either the "non-concentric arrangement of the members" taught by York '814 or the claimed "concentric arrangement of the members" because both arrangements would perform the required guiding and traveling of the platform with respect to the base member.

Furthermore, Applicant does not provide any criticality or unexpected results for the "concentric arrangement of the members" as recited in claim 3.

4. Claims 4-6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Orrell et al. '897. York '814 lacks the specific details of the tool assembly, relative to the servomotor, the controller, the speed sensor and at least one rare earth magnet. Orrell et al. '897 shows in Figure 8 a motor shaft (112), an armature winding (120) disposed about at least a portion of the motor shaft and a field assembly (earth magnets) positioned proximate the armature windings (col. 5, line 67 through col. 6, line 9). Orrell et al. '897 further shows a controller (142) and a speed sensor (138) coupled to the servomotor and adapted to

receive and transmit signals to the servo motor (col. 6, lines 10-42). In view of this teaching of Orrell et al. '897, it would have been obvious to one skilled in the art to substitute the servo motor of York '814 with the specific computer controlled servo motor of Orrell et al. '897 to achieve enhanced control over the drilling function.

With regards to claim 9, Examiner has taken "Official Notice" that it is well-known in the art to utilize a standard drill collet to secure a drill member. It would have been obvious to one skilled in the art to substitute the set screw (56) and socket (52) connection of York '814 in view of Orrell et al. '897 with standard collect well known in the art to achieve a more secure tool bit connection/fit and to reduce the likelihood of the set screw loosening and ultimately the drill bit disengaging during operation.

5. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Orrell et al. '897, further in view of Kostrzewski '948. York '814 in view of Orrell et al. '897 lacks the motor shaft including a lubrication reservoir coupled at a first end and a lubrication channel extending internally therethrough. Kostrzewski '948 shows in Figure 1 a lubrication reservoir (22,24) at a first end and a hollow shaft (14) forming a lubrication channel. In view of this teaching of Kostrzewski '948, it would have been obvious to one skilled in the art to provide a motor shaft lubrication system of Kostrzewski '948 to the motor shaft of York '814 in view of Orrell et al. '897 to provide a means to transport debris away from the cutting tool end during operation and to provide cooling which ultimately prolongs the tool life.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Brown et al. '889. York '814 lacks the drive member being specifically a ball screw member. Brown et al. '889 shows in Figures 5 and 6 the fluid operated cylinders (124) responsible for adjusting the base member (128) relative to the drive platform (64) can be one of a ball screw mechanism (col. 7, lines 19-25). In view of this teaching of Brown et al. '889, it

would have been obvious to one skilled in the art to substitute the feed screw drive mechanism (32) of York '814 with the ball screw mechanism of Brown et al. '889 to reduce the friction of the drive mechanism and ultimately extend the machines life span.

7. Claims 13-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Orrell et al. '897, further in view of Boyl-Davis et al. '328. York '814 in view of Orrell et al. '897 lacks the specific details of the track assembly. Boyl-Davis et al. '328 shows in Figures 1-5 a track assembly having a first (22) and a second (24) elongated flexible rail (col. 4, line 39 through col. 5, line 4) adapted to be attached to the workpiece via a plurality of vacuum cup assemblies (26) releasably affixed at spaced intervals along each rail and a carriage assembly (30) moveably coupled to the track assembly and the workpiece. In view of this teaching of Boyl-Davis et al. '328, it would have been obvious to one skilled in the art to mount the tool feed unit of York '814 in view of Orrell et al. '897 with the track assembly of Boyl-Davis et al. '328 to increase its versatility by more accurately positioning a drill machine on both simple and compound contoured-surfaces of various configurations with little effort by the user.

Allowable Subject Matter

8. The indicated allowability of claims 3-7 are withdrawn in view of the newly discovered reference(s) and/or "broadest reasonable interpretation" of York '814. Rejections based on the newly cited reference(s) and/or "broadest reasonable interpretation" are as described above.

Response to Arguments

9. Applicant's arguments filed 19 December 2005 have been fully considered but they are not persuasive.

Applicant's arguments and amendments are targeted towards the inclusion of a portion of the limitations from claim 8, specifically with (1) a first aperture of the base member and a second aperture of the drive platform being aligned with one another along an axis and (2) the

guide members and drive member being distributed about the apertures. York '814 clearly shows these limitations at least as well as Applicant's disclosure (see Fig. 4) with respect to the apertures being therethrough and the guide members and drive member being positioned about the apertures.

Claim 3, including depending claims 4-7, has been rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of a "broadest reasonable interpretation" of the reference as described above with respect to the "first and second annular portions" and the "concentrically arrangements of the guide and drive members.

Conclusion

10. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mr. Boyer D. Ashley, may be reached at 571-272-4502.

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filling papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.

MWT
Examiner
30 March 2006

BOYER D. ASHLEY
SUPERVISORY PATENT EXAMINER

ENTER 3/30/06

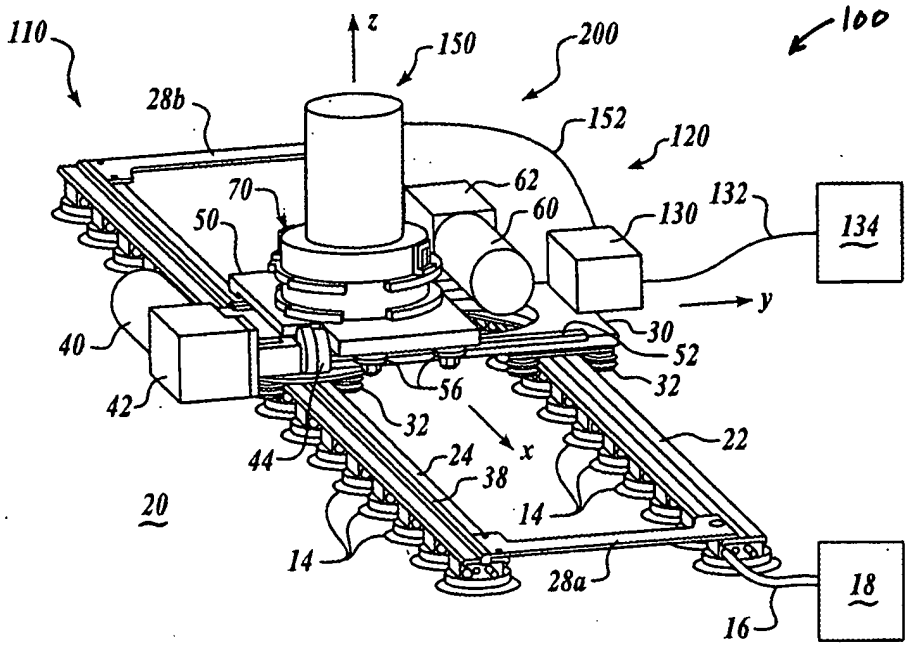

Fig.1

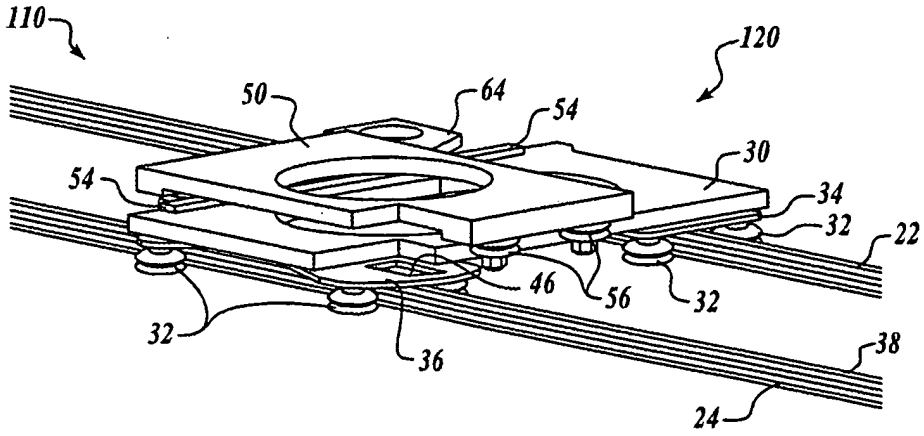

Fig.2

ENTER 3/30/06

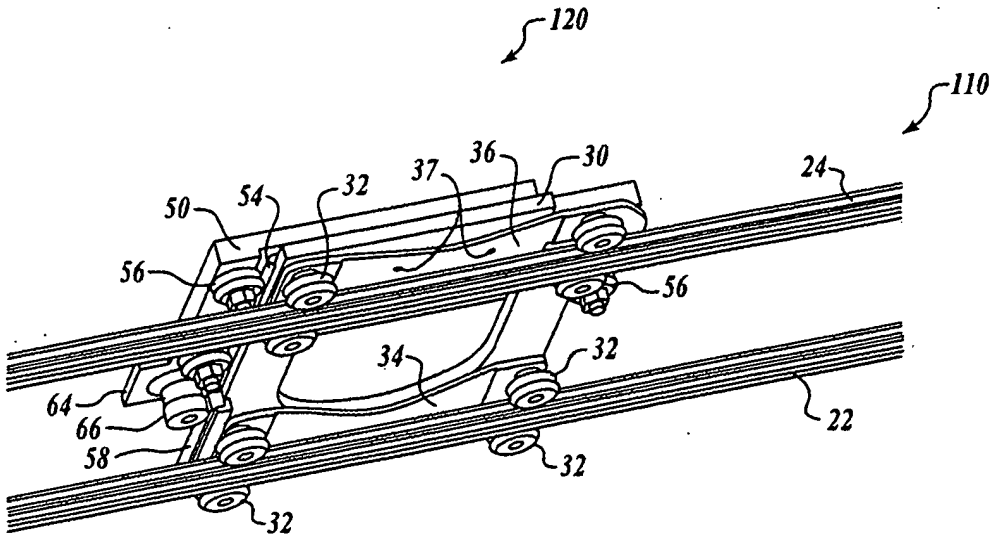

Fig.3

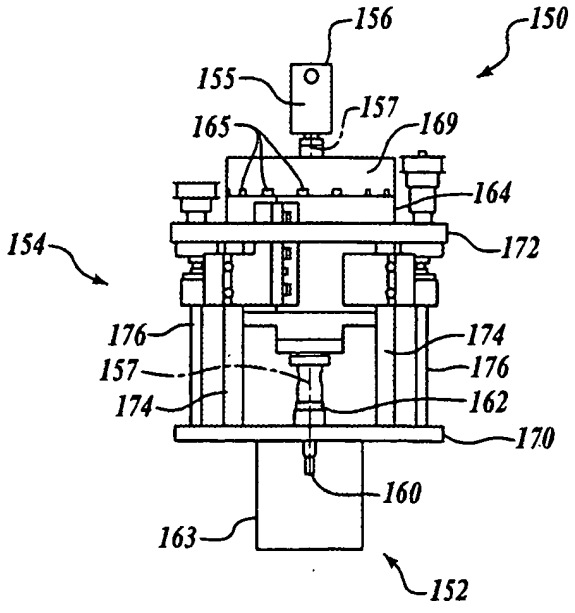

Fig.4

3/3

ENTER 3/30/06

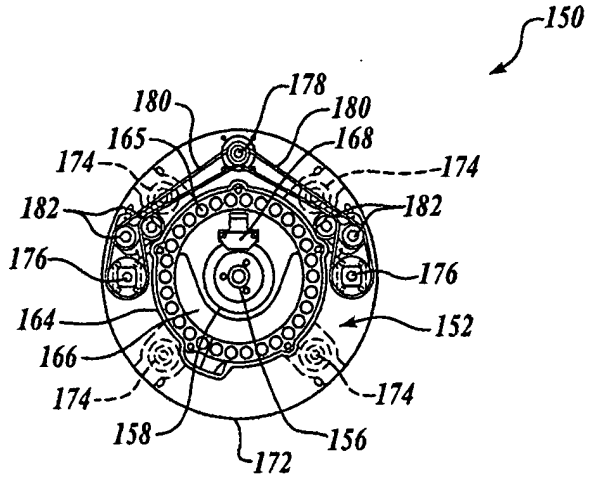

Fig.5

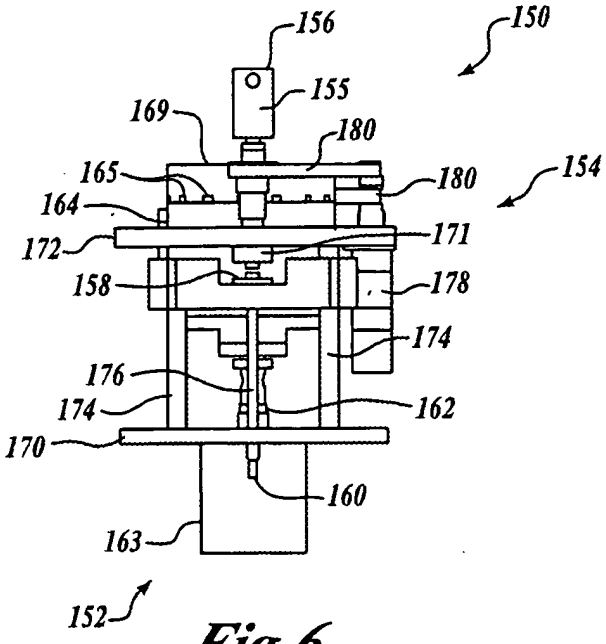

Fig.6